

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKAHISA EIMORI, SHINICHI SATOH, WATARU WAKAMIYA,
HIROJI OZAKI and YOSHINORI TANAKA

Appeal No. 94-4342
Application No. 07/765,771¹

ON BRIEF

Before WEIFFENBACH, PAK and WARREN, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's refusal to allow claims 10, 11, 14 and 15, which are all of the claims remaining in the application.

¹ Application for patent filed September 26, 1991. According to appellants, the application is a division of Application No. 07/391,008, filed August 9, 1989, now Patent No. 5,067,000, issued November 19, 1991.

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Claim 10 is representative of the subject matter on appeal and reads as follows:

10. A method for manufacturing a semiconductor device for electrically isolating a first device and a second device formed on a common semiconductor substrate of a first conductivity type having a major surface, comprising the steps of

forming a first conductor having a predetermined shape on the major surface of said semiconductor substrate and separated therefrom by a first insulating film, and forming a second insulating film on said first conductor,

forming a third insulating film having a predetermined vertical thickness on the major surface of said semiconductor substrate so as to cover said first conductor and said second insulating film,

removing said third insulating film by anisotropic etching to expose the major surface of said semiconductor substrate, to form on sidewalls of: said first insulating film; said first conductor and said second insulating film, a sidewall insulating film having a predetermined lateral thickness corresponding to said predetermined vertical thickness of said third insulating film,

thereafter, implanting impurities of a second conductivity type opposite to said first conductivity type on the exposed major surface of said semiconductor substrate utilizing as masks said third insulating film said sidewall insulating film, and

diffusing the implanted impurities to form a first impurity region included in said first device and a second impurity region included in said second device such that a

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boundary portion thereof is not overlapped by said first conductor over the major surface of said semiconductor substrate,

wherein said step of implanting said impurities comprises spacing said impurities laterally from said first conductor by said lateral thickness of said sidewall insulating film and thereby separating said impurities laterally from said first conductor by a distance corresponding to said predetermined vertical thickness of said third insulating film.

As evidence of obviousness, the examiner relies on the following prior art:

Horiuchi et al. (Horiuchi)	0171003	Feb. 12, 1986
(Published European Patent Application)		

Appellants' admitted prior art, figures 13A-13G and 14 and their description at pages 6 through 8 of the specification (hereinafter referred to as "admitted prior art").

Claims 10, 11, 14 and 15 stand rejected under 35 U.S.C. § 103 as unpatentable over the admitted prior art in view of Horiuchi.

Having carefully considered the entire record before us, including all of the arguments advanced by the examiner and appellants in support of their respective positions, we find ourselves in complete agreement with the position succinctly set forth by appellants in their Brief, pages 7 and 8, and Reply Brief, pages 1 and 2. As indicated by appellants, the

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prior art relied upon by the examiner does not teach, nor would have suggested, a step of implanting impurities comprising "spacing said impurities laterally from said first conductor by said lateral thickness of said sidewall insulating film and thereby separating said impurities laterally from said first conductor by a distance corresponding to said predetermined vertical thickness of said third insulating film." Accordingly, the § 103 rejection of claims 10, 11, 14 and 15 is reversed.

REVERSED

CAMERON WEIFFENBACH)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
CHUNG K. PAK)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
CHARLES F. WARREN)	
Administrative Patent Judge)	

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JENINE GILLIS

Appeal No. 94-4342

Serial No. 07/765,771

Judge PAK

Judge WEIFFENBACH

Judge WARREN

Typed: 11 Jul 98

DECISION: REVERSED

Send Reference(s): Yes No
or Translation(s)

Panel Change: Yes No

3-Person Conf. Yes No

Heard: Yes No

Remanded: Yes No

Index Sheet-2901 Rejection(s): _____

Acts 2: _____

Palm: _____

Mailed:

Updated Monthly Disk: _____

Updated Monthly Report:

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